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EXAMINER
KARKHANIS, AASHISH

ART UNIT	PAPER NUMBER
3714	

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/520,405	MARTINEK ET AL.	
	Examiner	Art Unit	
	Aashish Karkhanis	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *12/02/2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *58-73* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *58-73* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/16/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 58 – 60, 64, 71 and 73 are rejected under 35 U.S.C. 102(e) as being anticipated by Mathur et al., US 6,671,745 B1 (Dec. 30, 2003).

Claim 58. Mathur discloses:

a. A computerized controller having a processor, memory, and a nonvolatile storage. See fig. 2.

b. An operating system kernel that executes a system handler application, the system handler application operable to dynamically link with at a plurality of gaming program shared objects and load said program shared objects. See fig. 2, 3; col. 4: 7-12,. 6:28-65; 9:48-10:24.

c. A system handler application having an Application Program Interface (API) having functions callable from the program shared object, the API having a plurality of functions callable by and used by at least some of the shared objects. See id.

d. System handler application operable to initiate an program based on data variables stored in the nonvolatile storage the system handler application operable to write data variables to state storage and nonvolatile storage. See 5:1-26, 8:36-65. Specifically, Mathur discloses a process management system which can load and organize applications within the system. See col 7:59-60.

e. Operating system controlled by a general-purpose computer. See col. 4:22-30.

f. Nonvolatile storage stores program variables, such that loss of power does not result in loss of the state of the computerized system. See 5:1-26, 8:36-65.

g. A system handler application that loads a first shared object and the first shared object calls up a function from within an API. See fig. 2, 3; col. 10:13-31.

h. A file storage system for organizing data for retrieval and use. See fig. 2:218.

"Game" and "wagering game" software is functionally indistinguishable from other types of software. Thus the terms "game" and "wagering game" are merely suggestive of the system's intended use. A processor executing a wagering game performs the equivalent function in the same manner as the specialized industrial controllers, personal computers, hand-held computers or embedded systems described by Mathur at column 4, lines 15-30. These devices are capable of executing "game" software for a "wagering game".

Claim 59. A system handler application comprising an event handler which handles events. See col. 8:62-65.

Claim 60. A system handler unloading, loading and executing program shared objects. See col. 7:56-8:15. Specifically, Mathur discloses a process management system which can load and organize applications within the system. See col. 7:59-60.

Claim 64. A IBM PC-compatible computer. See col. 4:15-30.

Claim 71. Executing an operating system which then loads and operates the system handler application, the system handler application operable to dynamical link with a plurality of program shared objects and load said shared objects the system handler application having an API having a plurality of functions callable from at least some of the shared objects; the system handler application operable to initiate an software application based on data variables stored in a nonvolatile storage and the system handler application operable to write data variables to the nonvolatile storage; the system handler application then loading a first shared object and providing an API functions called by the first shared object, the system handler application then executing the first shared object. See, e.g., fig. 2, 3; col. 2:56- 3:36; 6:28-65, 8:35-65, 10:1 7-24.

"Game" and "wagering game" software is functionally indistinguishable from other types of software. Thus the terms "game" and "wagering game" are merely suggestive of the system's intended use. A processor executing a wagering game performs the equivalent function in the same manner as the specialized industrial controllers, personal computers, hand-held computers or embedded systems described by Mathur

at column 4, lines 15-30. These devices are capable of executing "game" software for a "wagering game."

Claim 73. A system handler application comprising an event handler which handles events. See col. 8:62-65.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 61 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathur in view of Brunner et al., US 4,727,544 (Feb. 23, 1988).

Claim 61. Mathur discloses a system handler that stores data variables modified by program shared objects in non-volatile storage and state storage to ensure data is not lost during a critical failure such as a power loss. See col. 8:15-46. Mathur does not describe, verifying the code for a shared object has not changed. Gaming regulations require that controllers include mechanisms to verify executable code and data which may affect payouts or game outcomes. Brunner, for example, teaches that known gaming devices include memory checking software which is implemented when a device is powered-up to detect unauthorized memory changes. See col. 1:13-32. The level (e.g. kernel, operating system or application) at which such software is implemented is within purview of the designer. Thus, it would have been obvious to a

gaming artisan at the time of the invention to modify the special purpose controller disclosed by Mathur, wherein the system handler executes a program to store application and state data to prevent loss after a power failure, to add the feature of verifying this code for shared objects has not changed in order to meet gaming regulations which require that controllers include mechanisms to verify executable code and data which may affect payouts or game outcomes.

Claim 62. Mathur discloses an index of pointers that associate variable names with data locations. See col. 7:4-9. Data may be stored in non-volatile memory. See col. 5:1-41, 8:36-46.

3. Claims 63 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathur in view of Brunner, as applied to claim 61 above, in further view of Pascal, US 5,791,851 (Oct. 26, 1999).

The combination of Mathur with Brunner describes all the features of the claim except causing the execution of a corresponding callback function when a data variable is changed into non-volatile storage. Pascal discloses an analogous operating system for a gaming device wherein callbacks are employed to communicate information between application modules upon the occurrence of certain events. See 1:44-2:30. In general, callback routines are used in state-based machines to communicate data between independent modules upon the occurrence of predetermined events. See col. 6:25-45. Pascal describes using callback to enhance the robustness of a gaming device under fault conditions to protect data that may affect the outcome of a game payout. See col. 2:25-30. In view of Pascal, it would have been obvious to an artisan at the time

of the invention to modify the customized gaming operating system suggested by the combination of Mathur with Brunner, wherein the system enhance security by monitoring application modules, to execute a callback function corresponding to a change in game data stored in non-volatile memory to enhance the security of the gaming device by monitoring changes in data that might affect the outcome of the game payout and thereby provide a more secure gaming device that is resistant to errors caused by losses in power or tampering.

4. Claims 65 - 67 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathur.

Claim 65. Mathur discloses an operating system, but it is not Linux. Linux is a well-known, commercially available operating system substitutable for the same purpose as the operating system describe by Mathur. Thus, by official notice, it would have been obvious to an artisan at the time of the invention to modify the controller disclosed by Mathur to substitute the Linux operating system in order to use an open-source, freely modifiable operating system, giving a developer more freedom to customize software to suit the needs of a situation.

Claims 66 and 67. Mathur discloses shared objects including device handlers wherein at least one device handler for a device is disabled, where a device handler is generic and may control many different types of devices. See col. 3:5-22, 9:48-10:49.

Claim 70. Mathur discloses a system handler application which loads and executes shared objects wherein the shared objects are operable to share data via program variables stored in non-volatile storage. See fig. 2, 3; col. 5:1-41. Mathur states

that different applications require different numbers of shared objects. See col. 2:18-49. Because of this, Mathur anticipates that any number of shared objects, including one, may be executed at a time, for a range of purposes, including for a system employing large objects that require the controller's full resources.

5. Claims 68 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathur in view of Angelo.

Claim 68. Mathur discloses a computerized game controller as described above, but does not disclose a hashing function for an operating system and system handler. Angelo teaches a method of storing secure hash values of operating system programs, programs which include an operating system and system handler (col. 3, lin. 18). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the computerized game controller of Mathur with the operating system programs secure hashing method of Angelo in order to ensure the integrity of a computerized game controller.

Claim 69. Mathur discloses:

a. A computerized controller having a processor, memory, and a nonvolatile storage. See fig. 2.

b. An operating system kernel that executes a system handler application, the system handler application operable to dynamically link with at a plurality of gaming program shared objects and load said program shared objects. See fig. 2, 3; col. 4: 7-12,. 6:28-65; 9:48-10:24.

c. A system handler application having an Application Program Interface (API) having functions callable from the program shared object, the API having a plurality of functions callable by and used by at least some of the shared objects. See id.

d. System handler application operable to initiate an program based on data variables stored in the nonvolatile storage the system handler application operable to write data variables to state storage and nonvolatile storage. See 5:1-26, 8:36-65. Specifically, Mathur discloses a process management system which can load and organize applications within the system. See col 7:59-60.

e. Operating system controlled by a general-purpose computer. See col. 4:22-30.

f. Nonvolatile storage stores program variables, such that loss of power does not result in loss of the state of the computerized system. See 5:1-26, 8:36-65.

g. A system handler application that loads a first shared object and the first shared object calls up a function from within an API. See fig. 2, 3; col. 10:13-31.

Response to Arguments

Applicant's arguments filed with respect to cancelled Claims 1 – 10, 13 – 21, and 38 and new Claims 58 – 73 have been fully considered but they are not persuasive.

The applicant argues that the claimed invention distinguishes over the prior art because Mathur does not disclose any relationship between an operating system,

system handler, shared objects, or device handlers. The examiner respectfully disagrees. Mathur discloses an interaction between an operating system and a system handler, which is analogous to a process scheduler, where shared programs are loaded into memory (see. 7:61-67; 8:1-5) as well as linked into proper locations in memory to protect the operation of each individual shared program (see. 8:6-9). Mathur also discloses device handlers, which allow an operating system to communicate with system hardware (see 6:24). With regard to the specific construction of each system of a system as disclosed by Mathur, the bounds of operating system, system handler, and application program interface portions of the mentioned system are made clear and definite without an explicit definition. It is for the above reason of functional completeness and equivalence to the applicant's claims of functionality that Mathur reads on the applicant's claims as pertinent prior art even though a specific arrangement is not mentioned in Mathur. Because Mathur includes the above features, it is not necessary for Brunner, Pascal, or Angelo to also contain those features. Since claim rejections involving the above mentioned patents were made under 35 USC § 103, it is only necessary to illustrate that one of ordinary skill in the art would have known how to combine the two references and arrive at the claimed invention.

Therefore, for all of the reasons given above, claims 58 – 72 are rejected.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,944,821 A: Secure hashing of operating system and related code.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aashish Karkhanis whose telephone number is 571-272-2774. The examiner can normally be reached on 0800-1630 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571)272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARK

CHERYL TYLER
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